

Math Trailblazers

Publisher: Kendall/Hunt Publishing Company

Evaluator Name(s): Antle, Brenda Mendenhall, Sheila Prince, Romiltia Lancaster, Sharon

Content Level: Math

Copyright: 1997-1998

Overall Strengths and/or Weaknesses

Disclaimer: Comments on the strengths and/or weaknesses of each book or program were written by members of the State Textbook/Instructional Materials Review Team and reflect their opinions. They do not reflect the opinions of the State Textbook Commission nor the Kentucky Department of Education. In addition, the State Textbook/Instructional Materials Review team completed each evaluation form during the week of July 8-12, 2002. In order to maintain the integrity of the review team's comments, editing was limited to spelling and punctuation.

CONTENT/PROCESS

Strengths: The material does address NCTM Standards.

Weaknesses: There does not appear to be any correlation between Math Trailblazers and the Kentucky Learning Goals and Academic Expectations, Core Content, and Program of Studies provided. The material does not appear to accomodate students with special needs, inexperienced teachers, Kindergarten students, interest/ability levels, or multiple intelligences. The material does not appear to have a spiral review of content, skills trace, or review of materials within the chapters. Kindergarten teachers must generate the materials and activities since they are not provided with the program.

ASSESSMENT

Strengths: Each level's assessment activities include open-reponse explanations.

Weaknesses: Kindergarten has no assessment activities available since there are no student resources. The assessment activities are in the Unit Resource Guide File that must be purchased.

ORGANIZATION AND STRUCTURE

Strengths: The student editions are broken down into 3 volumes and can be used at the teacher's discretion.

Weaknesses: The materials are in a challenging and non-traditional format that may cause parents to have difficulty understanding what is required for their child's work. The material does not appear to contain spiral reviews or skills trace. The Letter Home Spanish Translation contains errors in verb tenses and vocabulary usage.

STUDENT EXPERIENCES

Strengths: Students are given the freedom to explore and investigate mathematics using various strategies and techniques.

Weaknesses: The materials integrate math, science, and language arts but other cross-curricular content is limited.

TECHNOLOGY

Strength: There were no strengths observed.

Weaknesses: The series does not require the use of computers or software but the Teacher's Implementation Guide does include a limited list of software that can be purchased. There was no website address found by the reviewers.

RESOURCE MATERIALS

Strengths: There are lists that suggest tradebooks, software, and manipulatives but these items must be purchased separately.

Weaknesses: The Kindergarten Level teachers will have to create appropriate lesson activities since there are no student resources. There did not appear to be any accomodations for students with special needs.

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If this material is available in digital format, KDE strongly recommends that it be considered if there are students in the school who have a need for this type of material. **Is Not Available in digital format**

Recommended by reviewers to State Textbook Commission as a basal textbook or program.

OTHER COMMENTS: In the Kindergarten level, the Student components do not exist. The Kindergarten teacher will have to create student activities. The Spanish Translation Home Letter is not of professional quality because it contains errors in verb tenses and vocabulary usage. Math Trailblazers is a non-traditional program that may be better suited for an accelerated student population.

PUBLISHER'S EXPLANATION OF REVIEWERS' COMMENTS

(By action of the State Textbook Commission, publishers are being provided limited space, 150 words, to respond to what they may consider factual errors made by the reviewers in the written evaluation.)

-A correlation can be found at www.mathtrailblazers.com

-Math Trailblazers addresses all students and multiple intelligences with multiple physical representations, solution paths and open-ended questions.

-Material to support teachers of all experience levels are found in both the Unit Resource Guide and the Teacher's Implementation Guide including a step-by-step for teaching each lesson and reduced student pages in the margins.

-Math Trailblazers is designed so concepts and skills grow logically within a grade and between grades. This growth (spiral) can be found in the Scope and Sequence for each grade.

-Social Studies is embedded in almost every unit in every grade and can specifically be found in the Adventure Book for each grade.

-Websites containing online resources for teachers can be found at www.mathtrailblazers.com and www.math.uic.edu/IMSE/MTB/mtb.html

-All manufactured manipulatives are pre-packaged in grade level kits and are available from the publisher.

-A glossary and index for each grade level is available from the publisher.

STANDARDS FOR MATHEMATICS EVALUATION INSTRUMENT

Content/Process

1. Material is comprehensive and includes content emphasized in Kentucky's Learning Goals and Academic Expectations and supported by the Core Content for Assessment, Program of Studies, and relevant National Standards.

Rating: Adequate

Comments: The material does address NCTM Standards, however there does not appear to be any correlation between Math Trailblazers and the Kentucky Learning Goals and Academic Expectations, Core Content, and Program of Studies provided.

2. Content appears to be free from factual errors.

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Rating: Adequate

Comments: The material does address NCTM Standards, however there does not appear to be any correlation between Math Trailblazers and the Kentucky Learning Goals and Academic Expectations, Core Content, and Program of Studies provided.

3. Content makes connections to other content areas across the curriculum.

Rating: Adequate

Comments: The material does address NCTM Standards, however there does not appear to be any correlation between Math Trailblazers and the Kentucky Learning Goals and Academic Expectations, Core Content, and Program of Studies provided.

4. Concepts and application of skills to real-life situations are introduced when appropriate.

Rating: Adequate

Comments: The material does address NCTM Standards, however there does not appear to be any correlation between Math Trailblazers and the Kentucky Learning Goals and Academic Expectations, Core Content, and Program of Studies provided.

5. Content appears to be free of social, ethnic, racial, religious, gender, and geographic bias.

Rating: Adequate

Comments: The material does address NCTM Standards, however there does not appear to be any correlation between Math Trailblazers and the Kentucky Learning Goals and Academic Expectations, Core Content, and Program of Studies provided.

6. Material is flexible and accommodates various learning styles, interest/ability levels, and intelligences, including adaptations and accommodations for students with special needs.

Rating: Adequate

Comments: The material does address NCTM Standards, however there does not appear to be any correlation between Math Trailblazers and the Kentucky Learning Goals and Academic Expectations, Core Content, and Program of Studies provided.

7. Reading level is appropriate for interest and ability level of intended student group; level remains consistent throughout.

Rating: Adequate

Comments: The material does address NCTM Standards, however there does not appear to be any correlation between Math Trailblazers and the Kentucky Learning Goals and Academic Expectations, Core Content, and Program of Studies provided.

8. Content reflects research-based practices (e.g., hands-on activities, technology, problem-solving situations).

Rating: Adequate

Comments: The material does address NCTM Standards, however there does not appear to be any correlation between Math Trailblazers and the Kentucky Learning Goals and Academic Expectations, Core Content, and Program of Studies provided.

9. Concepts are explored in depth and reinforced throughout.

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Rating: Adequate

Comments: The material does address NCTM Standards, however there does not appear to be any correlation between Math Trailblazers and the Kentucky Learning Goals and Academic Expectations, Core Content, and Program of Studies provided.

Assessment

1. Student assessment is aligned with the instructional program. Assessment activities are similar to learning activities.

Rating: Adequate

Comments: The third grade level has three assessment in units 2, 10, and 20. The assessments in all grade levels are overall ongoing and have an end of the year assessment that is paper and pencil.

2. Assessment activities examine the extent to which students have internalized and made sense of mathematical concepts and whether they can use mathematics to communicate their ideas.

Rating: Adequate

Comments: The third grade level has three assessment in units 2, 10, and 20. The assessments in all grade levels are overall ongoing and have an end of the year assessment that is paper and pencil.

3. Assessment activities provide opportunities for students to demonstrate knowledge and skills in real-life situations and interdisciplinary applications.

Rating: Adequate

Comments: The third grade level has three assessment in units 2, 10, and 20. The assessments in all grade levels are overall ongoing and have an end of the year assessment that is paper and pencil.

4. A variety of assessments (e.g., diagnostic, formative, summative, open response, multiple choice, individual, small group, oral, demonstrations, presentations, self and peer, performance, portfolio prompts) is included.

Rating: Adequate

Comments: The third grade level has three assessment in units 2, 10, and 20. The assessments in all grade levels are overall ongoing and have an end of the year assessment that is paper and pencil.

5. Assessment activities provide opportunities for student integration of technology in the assessment process.

Rating: Adequate

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10. A variety of assessments (e.g., diagnostic, formative, summative, open response, multiple choice, individual, small group, oral, demonstrations, presentations, self and peer, performance, portfolio prompts) is included.

Rating: Adequate

Comments: The third grade level has three assessment in units 2, 10, and 20. The assessments in all grade levels are overall ongoing and have an end of the year assessment that is paper and pencil.

11. Assessment activities provide opportunities for student integration of technology in the assessment process.

Rating: Adequate

Comments: The third grade level has three assessment in units 2, 10, and 20. The assessments in all grade levels are overall ongoing and have an end of the year assessment that is paper and pencil.

Organization and Structure

1. Organization is logical and allows for spiraling of content.

Rating: Weak

Comments: The Letter Home Spanish Translation contains errors in verb tenses and vocabulary usage.

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2. Language is clear and concise with correct grammar and sentence structure.

Rating: Weak

Comments: The Letter Home Spanish Translation contains errors in verb tenses and vocabulary usage.

3. Vocabulary and key terms are clearly defined and easily accessible within each lesson.

Rating: Weak

Comments: The Letter Home Spanish Translation contains errors in verb tenses and vocabulary usage.

4. Visual illustrations (e.g., graphs, charts, models) and examples are clearly presented and content-related.

Rating: Weak

Comments: The Letter Home Spanish Translation contains errors in verb tenses and vocabulary usage.

5. Illustrations and language reflect diversity (e.g., racial, ethnic, cultural, age, gender, disabilities).

Rating: Weak

Comments: The Letter Home Spanish Translation contains errors in verb tenses and vocabulary usage.

6. Legible type, length of lines, spacing, page layout, and width of margins contribute to overall appearance and use.

Rating: Weak

Comments: The Letter Home Spanish Translation contains errors in verb tenses and vocabulary usage.

7. Student materials seem durable and conducive to daily student use (e.g., size, weight).

Rating: Weak

Comments: The Letter Home Spanish Translation contains errors in verb tenses and vocabulary usage.

8. Textbook includes appropriate and sufficient glossary, index, and appendices.

Rating: Weak

Comments: The Letter Home Spanish Translation contains errors in verb tenses and vocabulary usage.

9. Materials are organized into units of study (or similar structures) with daily lessons that include worthwhile, real-world tasks.

Rating: Weak

Comments: The Letter Home Spanish Translation contains errors in verb tenses and vocabulary usage.

10. Materials can be easily understood by students and parents.

Rating: Weak

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Student Experiences

1. The program emphasizes students *doing* mathematics rather than *memorizing* mathematics.

Rating: Strong

Comments:

2. Both group and individual activities are included.

Rating: Strong

Comments:

3. Materials and activities provide authentic applications that allow students to make meaningful connections across the curriculum, to real-world situations, and to interrelated mathematical concepts.

Rating: Strong

Comments:

4. Materials and activities encourage students to explore and investigate mathematical ideas through various problem-solving techniques.

Rating: Strong

Comments:

5. Materials and activities encourage students to read, write, and discuss mathematics.

Rating: Strong

Comments:

6. Materials and activities ask students to reflect upon, clarify, justify, and generalize their mathematical ideas.

Rating: Strong

Comments:

Technology

1. In order for students to focus on decision-making, reflection, reasoning, and problem solving, instructional activities incorporate the use of technology (e.g. calculators, probes, computers) and include instructions on how to use the technology tools.

Rating: Missing

Comments: According to the Teacher Implementation Guide "Math Trailblazers does not require the use of computers".

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2. Various forms of media are included (e.g., CDs, videos, computer software).

Rating: Missing

Comments: According to the Teacher Implementation Guide "Math Trailblazers does not require the use of computers".

3. Student materials are available online.

Rating: Missing

Comments: According to the Teacher Implementation Guide "Math Trailblazers does not require the use of computers".

Resource Materials

1. Teacher materials coordinate easily with student materials (e.g., additional resources included at point of need, student pages shown, manipulatives appropriate for indicated lesson, instructional technology indicated).

Rating: Weak

Comments: There are no manipulatives or technology included but are listed in the Teacher Implementation Guide. There is no correlation between the Teacher Guide and Student pages. The Kindergarten Level teachers will have to create appropriate lesson activities since there are no student resources.

2. Activities are included that adapt to the various learning styles, intelligences, and interest/ability levels.

Rating: Weak

Comments: There are no manipulatives or technology included but are listed in the Teacher Implementation Guide. There is no correlation between the Teacher Guide and Student pages. The Kindergarten Level teachers will have to create appropriate lesson activities since there are no student resources.

3. Extension activities including adaptations and accommodations for students with special needs.

Rating: Weak

Comments: There are no manipulatives or technology included but are listed in the Teacher Implementation Guide. There is no correlation between the Teacher Guide and Student pages. The Kindergarten Level teachers will have to create appropriate lesson activities since there are no student resources.

4. Resources provide objectives, background information, common student errors, hints, advice for lesson implementation and real-world connections, connections within mathematics, and references (e.g., solutions manuals, study guides).

Rating: Weak

Comments: There are no manipulatives or technology included but are listed in the Teacher Implementation Guide. There is no correlation between the Teacher Guide and Student pages. The Kindergarten Level teachers will have to create appropriate lesson activities since there are no student resources.

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5. Suggestions are made for integration of themes and/or interdisciplinary instruction.

Rating: Weak

Comments: There are no manipulatives or technology included but are listed in the Teacher Implementation Guide. There is no correlation between the Teacher Guide and Student pages. The Kindergarten Level teachers will have to create appropriate lesson activities since there are no student resources.

6. Suggestions are made for family and community involvement and school/home communication.

Rating: Weak

Comments: There are no manipulatives or technology included but are listed in the Teacher Implementation Guide. There is no correlation between the Teacher Guide and Student pages. The Kindergarten Level teachers will have to create appropriate lesson activities since there are no student resources.

7. The included media are durable, easy to use, and have technical merit.

Rating: Weak

Comments: There are no manipulatives or technology included but are listed in the Teacher Implementation Guide. There is no correlation between the Teacher Guide and Student pages. The Kindergarten Level teachers will have to create appropriate lesson activities since there are no student resources.

8. Teacher resources are available online.

Rating: Weak

Comments: There are no manipulatives or technology included but are listed in the Teacher Implementation Guide. There is no correlation between the Teacher Guide and Student pages. The Kindergarten Level teachers will have to create appropriate lesson activities since there are no student resources.